

## REMARKS

Claims 55-74, 78 and 80-91 have been rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 6,217,720 to Sullivan et al. (hereinafter “Sullivan”). Claims 75-77 and 79 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sullivan. Applicant respectfully traverses these rejections.

Applicant respectfully submits that Sullivan fails to teach or suggest reactive sputter depositing substoichiometric compound of the coating and performing plasma activation on the substoichiometric compound to provide a fully stoichiometric coating, as required in amended independent claims 55, 56 and 83 (and as exemplary set forth in paragraph [0017] of instant published application no. 2006/0151312).

Whereas, as essentially admitted by the Examiner, Sullivan merely describes “a first target [3] used to deposit a first layer via reactive sputtering, where the substrates [5] are rotated to a second target [3] to deposit a subsequent second layer via reactive sputtering.” (Final Office Action at 2, ¶ 2). Hence, Sullivan does not anticipate nor render obvious pending claims 55-91 “Because the hallmark of anticipation is prior invention, the prior art reference — in order to anticipate under 35 U.S.C. § 102 — must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Net MoneyIN, Inc. v. Verisign, Inc.*, 545 F.3d 1359 (Fed. Cir. 2008).

As noted herein, Sullivan merely describes depositing multi-layers of coating via reactive sputtering. Sullivan does not teach depositing a coating with a stoichiometric deficit such that the deposited coating is a substoichiometric compound that requires further processing. That is, Sullivan fails to teach or suggest performing plasma

activation on the substoichiometric compound of the coating to provide a fully stoichiometric coating, as required in amended independent claims 55, 56 and 83. In fact, Sullivan teaches away from the claimed invention to depositing a coating with a given stoichiometric deficit of the second constituent to provide a substoichiometric compound. In contrast to the claimed invention, Sullivan describes the importance of depositing a coating with a correct stoichiometry:

“It is important that dielectric films produced by reactive magnetron sputtering have the correct composition (stoichiometry). . . . A lack of stoichiometry can also lead to an increase in the absorption of the film. For instance, there is an oxygen partial pressure below which sputtering takes place in an uncovered metal mode resulting in near-metallic films (see FIG. 4). Above this oxygen partial pressure the target surface is partially or fully oxidized resulting in oxide films with little or no absorption. For this reason, the operating oxygen partial pressure is usually chosen to be at a safe value above this transition oxygen partial pressure. (emphasis added) (Sullivan at col. 8, lines 27-42).

“The computer 12 maintains the oxygen partial pressure constant by varying the oxygen flow rate with control unit 11.” (Sullivan at col. 7, lines 35-37).

Applicant respectfully submits that the Examiner cannot use hindsight gleaned from the present invention to modify the clear teaching of the prior art reference to render claims unpatentable. The prior must be judged based on a full and fair consideration of what that art teaches, not by using Applicant’s invention as a blueprint for gathering various bits and modifying the pieces in an attempt to reconstruct Applicant’s invention.

Therefore, the Examiner has failed to establish a *prima facie* case of anticipation or obviousness because Sullivan fails to teach all of the claim limitations of pending claims 55-91.

In response to Examiner's comments on page 6 of the instant Final Office Action, applicant respectfully directs the Examiner's attention to paragraph [0037] of the instant published application which recites that the second constituent can exemplary include oxygen, carbon or nitrogen.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0624, under Order No. NY-RPP 201-US from which the undersigned is authorized to draw.

Dated: May 3, 2010

Respectfully submitted,

By 

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